

Arizona Department of Health Services

ONCDPS Nutrition Standard

School Age

Dietary Quality/Appropriate Nutrition:

Macronutrients (1)

- **Protein:**
4-13 years – 0.95 g/kg/day
14-18 years – 0.85 g/kg/day
- **Carbohydrates:**
4-18 years – 130 g/day AI
no more than 25% of total energy from added sugars
- **Total fat:**
4-18 years – 25-35 g/day AMDR
Aim for 30% or less of total kcals from fat
- **Total Fiber:**
4-8 years – 25g/day AI
Males 9-13 years – 31 g/day, 14-18y – 38 g day AI
Females – 9-18 years – 26 g/day AI

Persons > 2 years should follow Dietary Guidelines (2)

Aim for Fitness . . .

- Aim for a healthy weight.
- Be physically active each day.

Build a Healthy Base . . .

- Let the Pyramid guide food choices.
- Choose a variety of grains daily, especially whole grains.
- Choose a variety of fruits and vegetables daily.
- Keep food safe to eat.

Choose Sensibly . . .

- Choose a diet low in saturated fat and cholesterol and moderate in total fat.
- Choose beverages and foods to moderate your intake of sugars.
- Choose and prepare foods with less salt.
- If you drink alcoholic beverages, do so in moderation.

Food Guide Pyramid Servings and Sizes (2,3)

Calorie needs vary widely for school age children. They should eat at least the lower number of servings from each of the five major food groups daily.

Most children will need more calories for growth and activity; they should eat larger portions of foods from the major food groups and some nutritious snacks – the 2,200-calorie pattern.

Recommended Daily Food Guide Pyramid Servings (2,3)			
<i>Food Group</i>	<i>Younger children, minimum servings (1,600)</i>	<i>Most children, teenage girls (2,200)</i>	<i>Teenage boys, very active teenage girls, pregnant or lactating teenagers (2,800)</i>
Grains Group – Especially whole grains	6	9	11
Vegetable Group	3	4	5
Fruit Group	2	3	4
Milk Group – Adults over 50 need 3 servings daily.	2 or 3	2 or 3*	3
Meat and Beans Group – Preferably lean or low-fat	2, for a total of 5 ounces	2, for a total of 6 ounces	3, for a total of 7 ounces
Total Fat	53 grams	73 grams	93 grams
Total Added Sugar	6 teaspoons	12 teaspoons	18 teaspoons

* Teenagers should have 3 servings from the Milk Group daily

Serving Sizes – Meat and Beans Group (meat, poultry, fish, dry beans, eggs, and nuts)

2-3 ounces of cooked lean meat, poultry, or fish
1/2 cup of cooked dry beans or 1 egg counts as 1 ounce of lean meat
Two tablespoons of peanut butter or 1/3 cup of nuts count as 1 ounce of meat.

Serving Sizes – Grain Products Group (bread, cereal, rice, and pasta)

1 slice of bread
1 ounce of ready-to-eat cereal
1/2 cup of cooked cereal, rice, or pasta

Serving Sizes - Vegetables

1 cup of raw leafy vegetables
1/2 cup of other vegetables -- cooked or chopped raw
3/4 cup of vegetable juice

Serving Sizes – Fruits

1 medium apple, banana, orange
1/2 cup of chopped, cooked, or canned fruit
3/4 cup of fruit juice

Fruit Juice should be limited to:

6 years: 4-6 oz/day

7-18 years: Two 6-oz servings or 1/2 of recommended fruit servings/d (4)

Serving Sizes – Milk and Dairy

1 cup of milk or yogurt
1-1/2 ounces of natural cheese
2 ounces of processed cheese

Some foods fit into more than one group. Dry beans, peas, and lentils can be counted as servings in either the meat and beans group or vegetable group. These "cross over" foods can be counted as servings from either one or the other group, but not both. Serving sizes indicated here are those used in the Food Guide Pyramid and based on both suggested and usually consumed portions necessary to achieve adequate nutrient intake. They differ from serving sizes on the Nutrition Facts Label, which reflect portions usually consumed.

Iron

- DRI'S: (4)
- 4-8 years: 10 mg/d
- 9-13 years: 8 mg/d
- 14-18 years males: 11 mg/d
- 14-18 years females: 15 mg/d

Iron Screening

All menstruating, non-pregnant adolescent females should be screened for iron-deficiency anemia every 5-10 years throughout their childbearing years during routine health examinations (5).

Males and females with risk factors for iron- deficiency anemia should be screened annually (e.g., extensive menstrual or other blood loss, low iron intake, previous diagnosis of anemia) (5).

Fruit/Vegetable Intake

Vitamin A

- DRI's (4)
- 4-8 years: 400 µg/d
- 9-13 years: 600 µg/d
- Males 14-18 years: 900 µg/d
- Females 14-18 years: 700 µg/d

Vitamin C

- DRI's (6)
- 4-8 years: 25 mg/d
- 9-13 years: 45 mg/d
- Males 14-18 years: 75 mg/d
- Females 14-18 years: 65 mg/d

Attempts should be made to serve high Vitamin C fruits and vegetables and high Vitamin A fruits and vegetables. This means offering a variety of colored fruits and vegetables each day. Sources of Vitamin A include carrots, sweet potato, spinach, collards, kale, squash, cantaloupe, and apricots. Sources of Vitamin C include orange juice, peppers, peaches, strawberries, broccoli and kiwi.

Calcium and Vitamin D

Calcium:

- DRI's (7)
- 4-8 years: 800 mg/d (AI)
- 9-18 years: 1300 mg/d (AI)

Vitamin D:

- DRI'S (7)
- 4-18 years: 5 mcg/day
- 1% or fat-free milk is recommended for children after the age of 2.
- Children who do not like the taste of milk can get calcium through flavored milk, cheese, and yogurt; lactose-intolerant children may tolerate smaller amounts of milk at a time, may also tolerate harder cheeses and yogurt. Calcium-fortified juices and other foods may also need to be chosen for the child that does not consume enough milk or dairy.

Folic Acid

- DRI'S (8):
- 4-8 years: 200 mcg/day, 400 mcg/day UL
- 9-13 years: 300 mcg/day, 600 mcg/day UL
- 14-18 years: 400 mcg/day, 800 mcg/day UL

Upper Limit (UL) applies to synthetic forms from supplements and fortified foods (1)

Sources of folic acid include ready-to-eat breakfast cereals, lentils, orange juice, spinach, black beans, asparagus, and fortified grains.

All women capable of becoming pregnant should consume 400 micrograms of synthetic folic acid daily, from fortified foods or supplements or a combination of the two, in addition to consuming folate in foods from a varied diet for the prevention of birth defects such as spina bifida and anencephaly.

Additional Considerations

Parents and other family members continue to influence school age children's eating behaviors and attitudes toward food. Parents need to make sure that healthy foods are available and decide when to serve them; however, children should decide how much to eat (5).

Healthy Weight

Overweight in children and adolescents is generally caused by lack of physical activity, unhealthy eating patterns, or a combination of the two, with genetics and lifestyle both playing important roles in determining a child's weight.

Screening (9)

Body Mass Index (BMI) is recommended for screening children and adolescents. BMI is calculated from weight and height measures and can be plotted on a standard growth chart. BMI for children, also referred to as BMI-for-age, is gender and age specific. BMI-for-age is plotted on gender specific growth charts.

Growth Charts are available at <http://www.cdc.gov/growthcharts>

BMI Calculator is available at <http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-means.htm>

Screening Guidelines (9)

- Underweight - BMI at or below < 5th percentile for age and sex
- At risk for Overweight - BMI > than or = to 85th percentile, but < 95th percentile for age and sex
- Overweight - BMI > than or = to 95th percentile for age and sex
- Children (older than 2) and adolescents with an annual increase of 3 to 4 BMI units should be evaluated.

Among children over 7 years, practitioners should pay particular attention to family history and secondary complications of overweight, such as hyperlipidemia and hypertension.

Physical Activity

Dietary Guideline Recommendation: Aim for Fitness (2)

- Kids need at least 60 minutes of moderate physical activity per day (tag, bike, walk, run, jump rope, etc)
- Adults should set an example for children: join kids in physical activity; encourage them to be active,
- Decrease TV and Computer time

Bright Futures Recommendations (5)

Age	Activities	Examples
5-6 years	Activities that focus on having fun and developing motor skills rather than on competition, that require little instruction and repetitive activities that do not require complex motor and cognitive skills.	Running, galloping, jumping hopping, throwing, catching, striking and kicking
7-9 years	Activities that focus on having fun and developing motor skills rather than on competition, that have flexible rules, require little instruction and do not require complex motor and cognitive skills	Throwing for distance and accuracy such as entry level baseball and soccer.
10-11 years	Activities that focus on having fun and developing motor skills rather than on competition, that require entry level complex motor and cognitive skills, that continue to emphasize motor skill development, but that begin to incorporate instruction on strategy and teamwork.	Playing basketball, skateboarding,
11-21 years	Activities that focus on having fun and developing motor skills rather than on competition improve motor skills and are a new challenge to increase their self-confidence.	Playing basketball or racquet sports, dancing, skating, biking, brisk walking and jogging.

Our society has become very sedentary. Television, computer and video games contribute to children's inactive lifestyles. (5) The American Academy of Pediatrics recommends the following in regards to television viewing for school-age children: (10)

1. Limit children's total media time (with entertainment media) to no more than 1 to 2 hours of quality programming per day.
2. Remove television sets from children's bedrooms.
3. Monitor the shows children and adolescents are viewing. Most programs should be informational, educational, and nonviolent.
4. View television programs along with children, and discuss the content.
5. Use controversial programming as a stepping-off point to initiate discussions about family values, violence, sex and sexuality, and drugs.
6. Use the videocassette recorder wisely to show or record high-quality, educational programming for children.
7. Support efforts to establish comprehensive media-education programs in schools.

Encourage alternative entertainment for children, including reading, athletics, hobbies, and creative play

Oral Health

- DRI's for Fluoride: (7)
- 4-8 years: 1 mg/d (AI)
- 9-13 years: 2 mg/d (AI)
- 14-18 years: 3 mg/d (AI)

Concentration of optimal fluoride in water for maximal dental caries prevention is 0.7 ppm to 1.2 ppm (11)

To prevent dental caries: Drink fluoridated water, use fluoridated toothpaste, brush & floss regularly, have dental sealants applied to pits/fissures of teeth & consume sugars in moderation (11)

Food Security

Food insecurity is the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways. Federal poverty guidelines are established by the Office of Management and Budget, and are updated annually by the Department of Health and Human Services.

Arizona Farmers' Market Nutrition Program: The WIC Farmers' Market Nutrition Program (FMNP) is associated with the Special Supplemental Nutrition Program for Women, Infants and Children, popularly known as WIC, provides supplemental foods, health care referrals and nutrition education at no cost to low-income pregnant, breastfeeding and non-breastfeeding post-partum women, and to infants and children up to 5 years of age, who are found to be at nutritional risk. Women, infants (over 4 months old) and children that have been certified to receive WIC program benefits or who are on a waiting list for WIC certification are eligible to participate. For additional information, call (800) 362-0101.

Child and Adult Care Food Program: Child and Adult Care Food Program provide nutritious meals and snacks to children and adults. For additional information, call Arizona Department of Education at (602) 542- 8700.

Free Meals	Incomes at or below 130 percent of the poverty level
Reduced meals	Incomes between 130 percent and 185 percent of the poverty level
Full price meals	Incomes over 185 percent of poverty level

Commodity Supplemental Food Program: The population served by CSFP is similar to that served by USDA's [Special Supplemental Nutrition Program for Women, Infants, and Children \(WIC\)](#), but CSFP also serves people who are 60 years or older, and provides food rather than the food vouchers that WIC participants receive. Eligible people cannot participate in both programs at the same time. CSFP food packages do not provide a complete diet, but rather are good sources of the nutrients typically lacking in the diets of the target population. For additional information, call (800) 362-0101.

Food Banks, Food Pantries, and Emergency Feeding Centers: The Food Stamp Program has an EMERGENCY status that reduces the time you will get stamps to SEVEN days. Food Banks and Pantries can give an emergency supply of food. For additional information, call Community Information and Referral at (800) 352-3792.

Food Stamp Program: The Food Stamp Program provides low-income families with electronic benefits they can use like cash at most grocery stores to obtain a more healthy diet. Eligibility is based on the Food Stamp household's resources (such as bank accounts), income, and other requirements such as residence, citizenship or qualified non-citizen status and cooperation with the Department of Economic Security's Food Stamp Employment and Training Program. For more information call 1-800-352-8401 or visit www.arizonaselfhelp.org/

School Lunch and Breakfast Program: The National School Lunch Program (NSLP) is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. For additional information, please call Arizona Department of Education (602) 542-8700.

Free Meals	Incomes at or below 130 percent of the poverty level
Reduced meals	Incomes between 130 percent and 185 percent of the poverty level
Full price meals	Incomes over 185 percent of poverty level

After school snacks are provided to children on the same income eligibility basis as school meals. However, programs that operate in areas where at least 50 percent of students are eligible for free or reduced-price meals serve all snacks free.

Senior Nutrition Programs: This program is designed to provide older Americans with low cost nutritious meals through both Congregate Meals and Meals delivered at home. Also, several private organizations provide "Meals-on-Wheels" service. For additional information, please call Elder Resource and Referral at (602) 542-4446.

Summer Food Program: The Summer Food Service Program ensures that children in lower-income areas receive nutritious meals during long school vacations, when they do not have access to school lunch or breakfast. SFSP sponsors receive payments for serving healthy meals and snacks to children and teenagers, 18 years and younger, at approved sites in low-income areas. For additional information, please call Arizona Department of Education (602) 542-8700.

WIC – Women, Infants and Children: The Special Supplemental Nutrition Program for Women, Infants, and Children - better known as the WIC Program - serves low-income women, infants, & children up to age 5 who are at nutritional risk by providing nutritious foods to supplement diets, information on healthy eating, and referrals to health care. For additional information, please call Arizona Department of Education (602) 542-8700.

Income at or below [185 percent of the Federal poverty income guidelines](#).

Food Safety

Fight Back

Clean – Wash hands and surfaces often

Always remember to wash hands, cutting boards, utensils, and cutting boards in hot soapy water before preparing food. Consider using paper towels to clean up kitchen surfaces. Or, if using cloth towels, consumers should wash them often in the hot cycle of the washing machine.

Separate – Don't contaminate

Separate and store raw meat, poultry and seafood from other foods on the bottom shelf of the refrigerator so juices don't drip onto other foods. If possible, use one cutting board for raw meat products and another for salads and other foods, which are ready to be eaten.

Cook to proper temperature

Cook meat, eggs, fish and poultry thoroughly. Make sure there are no cold spots in food (where bacteria can survive) when cooking in a microwave oven. For best results, cover food, stir and rotate for even cooking.

Chill - Refrigerate properly

Refrigerate or freeze perishables, prepared food and leftovers within two hours. Defrost (or marinate) food in the refrigerator, under cold running water or in the microwave.

Special concerns for school age children include bringing sack lunches to school. Of primary importance is keeping cold foods cold and hot foods hot when packed in a sack lunch. Children that do not have access to a refrigerator at school may need an ice pack in their lunchbox to keep items cool.

Useful Resources:

For other food safety information from

www.FoodSafety.gov

<http://www.fightbac.org/main.cfm>

<http://vm.cfsan.fda.gov>

www.fsisusda.gov

1-888-SAFEFOOD for seafood, fruits and vegetable information from the US Food and Drug Administration

1-800-535-4555 for meat and poultry information from the United States Department of Agriculture.

Shopping/Food Resource Management

Plan meals to save money, time and effort.

Make a grocery list of all the foods needed. Make meals easier to prepare by trying new ways to cook foods and use planned leftovers to save both time and money. (12)

Cost Saving Tips (12)

Look for specials in the newspaper ads for the stores and for coupons for foods on the grocery list.
Look for bargains on day-old bread and bakery products
Consider buying in bulk.
Buy fresh fruits in season.
Nonfat dry milk is the least expensive way to buy milk.
Use label and shelf information in the grocery store to compare fresh, frozen, and canned foods and convenience foods versus scratch foods to see which is less expensive.
Use dry beans and peas instead of meat, poultry, or fish.

Policy/Environmental Support

Environmental

Centers for Disease Control (13)

- Promote the availability of healthy foods in school meals, a la carte items, snack bars and vending
- Discourage food sales high in fat, sodium, added sugars (candy, fried chips & soda)
- Discourage food from being used as a discipline or reward
- Educate importance of breakfast
- Promote participation in USDA food assistance programs
- Provide nutrition education for preschool-12th grade
- Integrate school food service & nutrition education to reinforce healthy eating habits
- Involve family members in reinforcing healthy eating habits

National Association of State Boards of Education (14)

- Ensure schools have pleasant eating areas with adequate time for unhurried eating
- Promote modeling of healthy eating habits by school staff
- Provide nutrition education for every grade level: K5-12th grade
- Ensures affordable access to varied & nutritious foods consistent Dietary Guidelines by the food service program
- Encourage participation in school food programs

American Academy of Pediatrics (15)

- Promote lifelong physical activity (PE & health education for k-12th grade, etc) that is fun & educational
- Provide safe environments to encourage physical activity

National School Lunch Program

- Educate on the importance of breakfast
- Promote participation in USDA food assistance programs
- Provide nutrition education for preschool-12th grade
- Integrate school food service & nutrition education to reinforce healthy eating habits
- Involve family members in reinforcing healthy eating
- Food can not be used for a discipline
- Discourage food from being used as a reward

Policy

Arizona Action for Healthy Kids School Environment Policy is available at:

<http://www.ade.state.az.us/health-safety/cnp/nslp/NutritionPolicy-StateBoardMeeting.doc>

References

1. Food and Nutrition Board (FNB), Institute of Medicine (IOM). Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids (Macronutrients) National Academy of Sciences; 200
2. United States Department of Agriculture (USDA) and United States Department of Health and Human Services (HHS). Dietary Guidelines for Americans. 5th ed. Home and Garden Bulletin 2000; 232.
3. US Department of Agriculture, Center for Nutrition Policy and Promotion. The Food Guide Pyramid. Home and Garden Bulletin 1992; 252
4. Food and Nutrition Board (FNB), Institute of Medicine (IOM). Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc (2001). This report may be accessed via www.nap.edu
5. Bright Futures in Practice: Nutrition (2nd ed). Arlington, VA: National Center for Education in Maternal and Child Health, Story, M; Holt, K; Sofka, D., eds. 2002.
6. Food and Nutrition Board (FNB), Institute of Medicine (IOM). Dietary Reference Intakes for Vitamin C, Vitamin E, Selenium, and Carotenoids (2000). This report may be accessed via www.nap.edu
7. Food and Nutrition Board (FNB), Institute of Medicine (IOM). Dietary Reference Intakes for Calcium, Phosphorous, Magnesium, Vitamin D, and Fluoride (1997). This report may be accessed via www.nap.edu
8. Food and Nutrition Board (FNB), Institute of Medicine (IOM). Dietary Reference Intakes for Thiamin, Riboflavin, Niacin, Vitamin B6, Folate, Vitamin B12, Pantothenic Acid, Biotin, and Choline (1998). This report may be accessed via www.nap.edu
9. CDC: BMI: Body Mass Index, BMI for Children and Teens, <http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm>
10. American Academy of Pediatrics: Children, Adolescents, and Television. *Pediatrics*. 2001; 107(2):423-426

References – continued

11. CDC: Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States. MMWR: 50(RR-14), 2001.
12. Preparing Nutritious Meals at Minimal Cost. 1999. Prepared by Myrtle Hogbin, Carole Davis, and Alyson Escobar. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. CNPP-7B, page 29.
13. CDC: MMWR: Guidelines for School Health Programs to Promote Lifelong Healthy Eating; 45 (RR-9), June 14, 1996
14. NASBE (National Assoc. of State Boards of Education) Sample policy to encourage healthy eating;
www.nasbe.org/HealthySchools/Sample_Policies/healthy_eating.html
15. American Academy of Pediatrics: Recommendations for Schools; Pediatrics; 105(5); May 2000